REMARKS

Claims 97, 99, and 105-113 are pending. Applicant's January 31, 2007 amendment to claims 97, 99, 112 and 113 after final Office Action has been entered and made of record, as indicated in the Advisory Action dated February 22, 2007. Claims are further amended in this response, and only such further amendment from the claims made of record is indicated in this response to the February 22, 2007 Advisory Action. No new matter has been introduced by the current amendment, which more specifically and clearly describes the claimed subject matter.

Double Patenting

Applicants thank the Examiner for withdrawing the rejection for obviousness-type double patenting over claims 1-8 of US 6,288,031, claims 1-2 of US 6,495,513, claims 1-16 of US 6,800,603 and claims 1-18 of 6,949,505.

35 U.S.C. §112 First Paragraph

Claims 97, 99, and 105-113 remain rejected under 35 U.S.C. §112 First Paragraph allegedly for not being enabled by the specification. In addition to maintaining the reasons of rejections in the office action, the Examiner alleged that the specification does not provide sufficient guidance as to how a neuropathy is associated with a changed level of N-CAM or L1 isoform, because an "altered level" could be either increase or decrease. The Examiner maintained that the specification is not enabling for such method with regard to all forms of neuropathy or injury, including both central nervous system neuropathy and injury when, according to the Examiner, the disclosure supports the method for the peripheral nerve system but not the central nervous system. The Examiner alleged that chemical injury includes chemical burn by a strong chemical, and neurons damaged in such a way would never recover. The Examiner conceded that the specification is enabling for reducing neuronal cell death derived from peripheral nerve injury and neuronal cell death caused by ethanol exposure.

Without conceding the correctness of the Examiner's allegation, in the interest of advancing prosecution, Applicants have amended the claims to more specifically describe the characteristics of neuropathies and injuries that the claimed methods address. The support for

the amendment can be found throughout the specification, but in particular, in the text found on page 6, lines 6 to 34; and page 15, lines 5 to 12.

As explained in the previous response to the final Office Action, it is clear from the claims themselves and the specification that the basis for the therapeutic effect of the morphogen to decrease cell death is at least in part due to the morphogen's ability to increase or sustain N-CAM and/or L1 isoform expression. See, for example, page 6 lines 6 to 34 for the state of the art regarding N-CAM and neuronal cell growth, differentiation and development, and Example 6 at page 76 line 1 to page 80 line 18 for the effect of morphogen on the production of L1 and N-CAM and, consequently, the survival of neural cell in vitro. Therefore, subjects with divergent neuropathies and injuries that are associated with neuronal cells that were impaired in N-CAM and/or L1 isoform activity, which in turn correlates with the lower survival rate of neuronal cells, would benefit from administration of a morphogen. The direct support for the amended language of claims 97 and 112 is found on page 79 at lines 20-27, and on page 80, lines 6 to 17. The amended claims now clearly states cells with decreased, rather than altered, N-CAM activities, which include expression and the actual activities of N-CAM (as seen by the resulting cell adhesion), are to be the target of the claimed methods.

The Examiner alleges that the claims are not enabled for damages to central nervous system (CNS) neurons. Applicants respectfully direct the Examiner's attention to Example 8, which describes the treatment of damages to the optic nerve, which is considered to be part of the CNS. Applicants also would like to point out that the USPTO previously granted some of the inventors in the instant application and their colleagues, claims directed to nerve gap repair, in U.S. Pat. No. 6,495,513, the application underlying which shares one of the parent applications with the instant application and describes essentially the same examples, without limitation to peripheral nerve system (PNS). In fact, the specification thereof makes clear that the method is directed to central nervous system as well. Applicants urge the Examiner to withdraw this rejection reason, given that the USPTO found the disclosure sufficient to issue claims covering CNS based on essentially the same example.

Applicants also amended the claims to recite the causes of chemical injury, as described in the specification at page 12, solely to advance prosecution. Applicants reserve the right to file

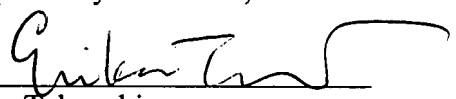
a continuing application for other causes of chemical injury, which Applicants believe are adequately represented by the disclosure herein.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no additional fee is due with this response. However, if any fee is due, please charge our Deposit Account No. 18-1945, under Order No. JJJ-P06-504 from which the undersigned is authorized to draw.

Dated: April 30, 2007

Respectfully submitted,

By 

Erika Takeuchi
Registration No.: 55,661
FISH & NEAVE IP GROUP,
ROPES & GRAY LLP
1211 Avenue of the Americas
New York, New York 10036-8704
(212) 596-9000
(212) 596-9090 (Fax)
Attorneys/Agents For Applicant